separated and enclosed surface by moving the support so that the plurality of the separated impaction surfaces are agitated simultaneously, and removing a desired amount of liquid for a sample from each separate enclosure.

3.(Amended) The method of claim 1, including agitating the solvent in all of the separate enclosures by rocking the support for the plurality of impactor components.

9.(Amended) A method of obtaining samples from a plurality of separated impaction surfaces on which classified particles have been deposited, comprising supporting a plurality of the impaction surfaces, each in a separate enclosed chamber on a common carrier, introducing a solvent into each of the enclosed chambers, agitating the solvent in all of the enclosed chambers simultaneously to dissolve particles on the impaction surfaces, and providing separate fluid connections to each of the enclosed chambers for the impaction surfaces for the introduction of the solvent.

10.(Amended) The method of claim 9, including removing a sample from each of the chambers held on the carrier.

12.(Amended) The method of claim 9, wherein each of said chambers is formed by a cup having flanges around the edges thereof, the impaction surfaces being on the interior of the cup, supporting the flanges on the carrier and providing a manifold overlying the plurality of cups on the carrier, and the step of providing fluid connections comprising providing separate openings in said manifold to access each cup separately for introducing solvent and removing samples from the respective cup.

15.(Amended) An apparatus for aiding in the dissolution of particles held on impaction surfaces, after the particles have been classified as to size in an impactor having separated impaction surfaces, comprising a support having a plurality of receptacles for receiving the separated impactor components having impaction surfaces carrying the particles, said support being mounted for movement, and the support having an overlying cover including openings for introducing a solvent into each impactor component to immerse each of the impaction surfaces.

16.(Amended) The apparatus of claim 15, wherein said support holds individual impactor cups forming the impactor components having impaction surfaces on the interior thereof, and a clamp to clamp the cover against the cups in position in receptacles of the support.

17.(Amended) The apparatus of claim 15, wherein each of the impactor components comprises a cup that has a flange around the periphery thereof, the support comprising a tray having openings to permit a majority of each of the cups to pass through the respective opening and the tray comprising the support for the respective cup on the cup flange, a housing having openings in an upper surface for supporting the tray with the cups protruding into the openings of the housing, the cover engaging the flanges of the cups and holding the cups, the tray, and the housing as a unit.

18.(Amended) The apparatus of claim 17 and seals around the cups engaging the flange and sealing each of the cups relative to the cover.

28.(Amended) A method of processing particles held on impactor plates in separated chambers comprising selecting one of the

methods of adding solvents to each chamber consisting of manual pipetting and automatic pipetting; selecting one of the methods of dissolution of particles in the solvent comprising using one of the group consisting of gentle agitation, mechanical vibration, ultrasonic vibration, recirculation, and direct contact rubbing; acquiring a sample from each chamber after the dissolution step by one of the methods of sample acquisition consisting of a manual syringe, an automatic syringe, or decanting liquid from the cup from the dissolved sample; and thereafter disposing of waste sample solutions in each chamber and, washing and drying the impactor plates.

A5

32. (Amended) The method of claim 28, wherein drying comprising one of the group consisting of manual drying, hot air drying, and hot nitrogen enriched air drying.

A4